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(54) Title: METHOD AND APPARATUS FOR PRICING A COMMODITY

(57) Abstract:

TITLE: METHOD AND APPARATUS FOR PRICING A COMMODITY

Field of the Invention

The present invention relates generally to a method and apparatus for  
5 pricing commodities and, more particularly, to a method and apparatus for  
pricing commodities at a plurality of time periods, based upon a predetermined  
formula incorporating market conditions.

Background of the Invention

10 It is generally known in the art for a supplier of a commodity, such as  
grain, to agree to contract with a third party, such as an elevator, to price the  
commodity for transfer at some future date. By pricing the grain prior to  
delivery, the supplier obtains security against market price volatility.  
Similarly, with more information concerning future storage needs, the elevator  
15 is better able to manage its resources. While this technique reduces risks  
associated with market volatility, it also prevents a supplier from capitalizing  
on the same volatility. Preferably, a supplier would desire to price a smaller  
quantity of commodity at a period when the market is reflecting a lower price,  
and price a larger quantity of the commodity when the market is reflecting a  
20 higher price. Suppliers are often willing to substitute a small increase in risk  
for an opportunity to capitalize on upward fluctuations in a commodity  
market.

One drawback associated with pricing smaller amounts of a commodity  
at different periods of time is the time and effort required to monitor the  
25 market, decide on an appropriate time to price the commodity, and execute the  
documentation required to price several small quantities of the commodity. As  
suppliers typically desire to capitalize on market swings shortly after large  
fluctuations, the suppliers must constantly access information regarding  
current market conditions. Even a short delay can turn a potential profit into  
30 a loss. It would, therefore, be desirable to allow a supplier to capitalize on  
market fluctuations by allowing the supplier to price portions of a commodity

Advantageously, this invention provides a method and apparatus which reduces the impact on a commodity supplier of market price downturns.

Advantageously, this invention provides a method and apparatus which reduces the need of a commodity supplier to reassess pricing strategy during a  
5 pricing period.

Advantageously, this invention provides a method and apparatus which reduces the need of a commodity supplier to monitor market trends during a pricing period.

Advantageously, this invention provides a method and apparatus which  
10 increases the security of an investment a commodity supplier has in a particularly commodity.

Advantageously, this invention provides a method and apparatus which can price a greater portion of a commodity during seasonal upturns in a commodity market.

Advantageously, this invention provides a method and apparatus which  
15 can price a greater portion of a commodity during periods where a market price is greater than an identified market price trend.

Advantageously, this invention provides a method and apparatus which allows a commodity contractor to more efficiently utilize its resources.

Advantageously, this invention provides a method and apparatus which  
20 can price a greater proportion of a commodity during a significant market price rally.

Advantageously, this invention provides a method and apparatus for pricing a greater proportion of a commodity when a market price rally stops or  
25 turns downward.

Advantageously, in a preferred example of this invention, a method of pricing a commodity is provided, comprising selecting a predetermined market factor selected from the group consisting of a predetermined time factor, a predetermined price factor, a predetermined trend factor, a predetermined  
30 market status factor and a predetermined market control factor. At a first time period, a first market condition is selected from the group consisting of a

offerings web page; Fig. 14 illustrates an account management web page; Fig. 15 illustrates a portion of an exemplary supplier database; Fig. 16 illustrates a portion of an exemplary contractor database; Fig. 17 illustrates a portion of an exemplary contract database; Fig. 18 illustrates a flow chart of an exemplary process for allowing a contractor to access, modify or manage an account; Figs. 19A-B illustrate a flow chart of an exemplary process for allowing a supplier to create access, modify or manage an account; and Figs. 20A-B illustrates a flow chart of an exemplary process for pricing a commodity pursuant to a predetermined formula agreed upon by a supplier and a contractor.

#### Detailed Description of the Preferred Embodiment

The Internet comprises millions of computers and computer networks, interconnected to one another for the exchange of information via many avenues, including the World Wide Web (the "Web"). The Web allows a "Server" to send graphical information ("Web Pages") to a remote computer. The remote computer then displays the Web Pages, using a "Browser". A user of the remote computer can locate desired Web Pages using a "Search Engine" and access the Web Pages using a mouse or similar pointing device to "Click" a "Hyperlink" associated with the desired Web Page. A Hyperlink comprises hypertext markup language ("HTML") associated with a Uniform Resource Locator "URL". When clicked, the Hyperlink prompts a Server identified with the URL to send the Web Pages to the user for display.

The present invention provides a method and apparatus for a commodity supplier, such as a commodity producer or such supplier's agent, to utilize the Web, or a similar computer network, to create, modify, manage and cancel contracts associated with the pricing of small quantities of a commodity pursuant to a predetermined formula. The method facilitates a supplier and a contractor entering into an agreement, utilizing the predetermined formula and a predetermined market factor, to price portions of a commodity throughout a predetermined pricing period.

Preferably, the supplier (16) is also provided with a database (22), containing information regarding the commodity (20). The supplier (16) may either update the database (22) manually or automatically, using information periodically transmitted from the server (10). The database (22) allows the  
5 supplier (16) to track all of the supplier's commodities (20) simultaneously, and determine whether a particular pricing strategy should be modified to price more or less of the commodity (20) in the future.

As shown in Fig. 1, the direct interface (42) of the server (10) is coupled to a contractor (44) provided with an interface (46), and is also coupled to a  
10 market (48) having an interface (50). The interfaces (46) and (50) are preferably standard interfaces, suitable for direct connection with the direct interface (42) of the server (10). In the preferred embodiment, the contractor (44) is a grain elevator or similar "middle-man", capable of directly receiving a commodity (20), which it may maintain in its storage facility (52) prior to  
15 subsequent transfer. The market (48) is preferably an established commodity market, such as the Chicago Board of Trade, or similar market. In the preferred embodiment, the market interface (50) provides for password-protected, digital placement of commodity trades to allow the server (10) to quickly price a portion of a commodity (20) through either a direct digital  
20 connection with the market (48), a connection to the market (48) through the Web (12), or any similar connection means. Although in the preferred embodiment the server (10) is shown coupled to a single supplier (16), a single contractor (44) and a single market (48), in the preferred embodiment the server (10) is preferably coupled to several such entities, to provide not only a  
25 larger volume of commodity transfer, but more liquidity and storage options for the commodity (20) itself.

An agent (24) is also coupled to the Market (48) and provided with an interface (26), as is a speculator (28), having an interface (30), and a buyer (32), having an interface (34). The interfaces (26), (30) and (34) are preferably  
30 similar to the interface (18) described above, in reference to the supplier (16). In the preferred embodiment, the agent (24) is an entity, acting on behalf of a

Web interface (40) and direct interface (42). The databases (54), (56), (58) and (60) are all preferably provided with redundancy and backup systems, such as those known in the art, to prevent inadvertent data loss or corruption.

Fig. 2 illustrates a home page web page (64), which includes an options menu (68) constituting a plurality of hyperlinks (66). These hyperlinks (66) are coded in HTML to allow a supplier (16) or other entity to obtain content for an alternate web page by clicking directly on the hyperlinks (66) with a pointing device. As shown in Fig. 2, the home page web page (64) includes hyperlinks (66), identifying a plurality of options, including hyperlink (66) to web pages containing information regarding administrative matters, a hyperlink (70) to a web page listing various commodity contract offerings, a hyperlink (72) to a web page detailing policies associated with the website (78), a hyperlink (66) to web pages used to create, modify or cancel commodity contracts, a hyperlink (74) to a web page containing various simulations of pricing methods in accordance with the present invention, and a hyperlink (76) to a web page containing an overview of the entire Web Site (78). The website (78) comprises the web interface (40) and the web pages contained within the web pages database (54). The hyperlinks (66) described above are merely exemplars, and may be replaced with any desired links to any suitable web pages, including, but not limited to, web pages constructed by third parties outside of the Web Site (78).

Shown in Fig. 3 is a log-in web page (80), including an input field (82) for inputting a password (84). If the supplier (16) does not have a password (84), the server (10) may either provide for on-line registration, in a manner such as that described below, or provide the supplier (16) with information relating to registration via standard mail delivery, or any other registration process. Such registration would preferably include information which the server (10) inputs into the supplier database (56). The registration culminates in the server (10) generating a password (84) and forwarding it to the supplier (16). The supplier (16) then inputs the password (84) in the input field (82) of the log-in web page (80). Preferably, the input field (82) is designed to display

including a contractor input field (114), a hedging month input field (116), an account input field (118), and a price change input field (120). The supplier (16) selects the desired information (122) contained within the input fields (112), and clicks on the "run projection" HTML (124). Clicking on the "run projection" HTML causes the central processing unit (62) to access the supplier database (56) and the contract database (60) to generate the projection table (126). The projection table (126) displays the number of bushels to be priced for each separate contract, based upon a range of potential price changes. When the supplier (16) has finished with the supplier projection web page (110), the supplier clicks on the "home" hyperlink (128), which causes the server (10) to send the home page web page (64) to the supplier (16).

Once at the home page web page (64), if the supplier (16) desires to find information relating to a particular contract, the supplier (16) clicks on the "find/modify contract" hyperlink (130). (Figs. 1-2). This action causes the server (10) to send the find contract web page (132) shown in Fig. 6, to the supplier (16). As shown in Fig. 6, the find contract web page (132) includes a contractor input field (134), an account input field (136), a contract status box (138), a commodity input field (140), and a contract type input field (142). The supplier (116) selects the desired information (144) contained within the input fields (134), (136), (138), (140) and (142), and then clicks on the "search" HTML (146). This causes the central processing unit (62) to access the supplier database (56) and contract database (60) to generate the contract table (148), identifying information relating to a particular contract. When the supplier (16) is finished with the find contract web page (132), the supplier (16) clicks on the "home" hyperlink (150), which causes the server (10) to forward the home page web page (64) to the supplier (16).

If the supplier (16) desires to locate available contract offerings within a particular geographic region, the supplier (16) simply clicks on the "offerings" hyperlink (70), which causes the server (10) to forward the contract offerings web page (152), shown in Fig. 7, to the supplier (16). As shown in Fig. 7, the contract offerings web page (152) includes a distance input field (154) and a zip

information (190) displayed on the contract detail web page (194). Clicking on the "download" HTML (200) prompts the server (10) to incorporate the information (190) into a standard form contract, and transfer the contract to the supplier (16). The supplier (16) may then forward the contract to a  
5 contractor (44) for review, or print out the contract for written execution. If the supplier (16) desires to execute a digital contract, the supplier (16) clicks on the "execute" HTML (202), which causes the server (10) to forward the contract web page (204) to the supplier (16). (Figs. 9-10).

The contract web page (204) includes a contract (206) having a text  
10 portion (208). Although the text portion (208) may be of any suitable type desired by the parties or known in the art, in the preferred embodiment, the text portion (208) incorporates the information (190) inputted by the supplier (16) on the new contract creation web page (168). Once the supplier (16) has reviewed and approved the text portion (208) of the contract, the supplier (16)  
15 inputs information (210) into either a user ID input field (212) or a digital signature input field (214). As shown in Fig. 10, the information (210) displayed in the input fields (212) and (214) is displayed as asterisks to prevent inadvertent disclosure of the information (210). Once the supplier (16) has inputted the information (210) into one of the input fields (212) or (214),  
20 the supplier (16) clicks on the "submit" HTML (216). Clicking on the "submit" HTML (216) causes the server (10) to digitally encode and store a copy of the executed contract (206) for future confirmation. The server (10) also forwards a copy of the executed contract (206) to both the supplier (16) and contractor (44) for their records. The server (10) also updates the supplier database (56),  
25 contractor database (58) and contract database (60) to reflect the execution of the new contract (206), and forwards the home page web page (64) to the supplier (16).

If a contractor (44) desires to utilize the method of the present invention, the contractor (44) accesses the log-in web page (80), and inputs its  
30 password (84) in the input field (82). If the contractor (44) does not have a password (84), the server (10) provides a password (84) to the contractor (44) in



(232), the contractor (44) clicks on the "home" HTML (248), which causes the server (10) to forward the home page web page (64) to the contractor (44).

If the contractor (44) desires to review current contract offerings, the contractor (44) clicks on the "offerings" hyperlink (70), which causes the server  
5 (10) to forward the current offerings web page (250), shown in Fig. 13, to the contractor (44). The current offerings web page (250) includes a contractor input field (252), into which the contractor (44) inputs information (254) before clicking on the "select" HTML (256). Clicking on the "select" HTML causes the central processing unit (62) to access the contractor database (58) and contract  
10 database (60) to display the offerings table (258). The offerings table (258) displays information related to current contract offerings, including contractor, contract name and type. Once the contractor (44) has finished reviewing the offerings table (258), the contractor (44) clicks on the "home" HTML (260). Clicking on the "home" HTML causes the server to forward the home page web  
15 page (64) to the contractor (44).

If the contractor (44) desires to manage an account, the contractor (44) clicks on the "add/modify account" hyperlink (262), shown in Fig. 2. This causes the server (10) to forward the account management web page (264) to the contractor (44). As shown in Fig. 14, the account management web page  
20 (264) includes an account input field (266), within which the contractor (44) selects the desired information (268) regarding the desired account to manage. The contractor (44) may then click on the "modify selected account" HTML (270), which causes the server (10) to forward to the contractor (44) a web page (not shown) containing a plurality of input fields containing information which  
25 the contractor (44) may modify. Alternatively, if the contractor (44) wishes to create a new account, the contractor (44) merely clicks on the "create new account" HTML (272), which causes the server (10) to forward to the contractor (44) a web page (not shown) containing input fields prompting the contractor (44) to input information regarding the new account. Once the contractor (44)  
30 has finished with the account management web page (264), the contractor (44)

contractor (44), and the direct interface (42) of the server (10). (Figs. 1 and 18). As noted above, however, this connection can be made over the Web (12) or by any other suitable means of communication. Once the contractor (44) contacts the server (10), the server (10), in Step (336), requests a password (84) at the  
5 log-in web page (80). If the contractor (44) does not have a password (84), the server (10), in Step (338), requests registration information from the contractor (44). The contractor (44), in Step (340), inserts the registration information in an input field on a web page forwarded to the contractor (44) by the server (10). Alternatively, the contractor may provide the registration to the server  
10 (10) by e-mail, facsimile or any other suitable means of communication.

Once the contractor (44) has provided the registration information, the server (10), in Step (342), displays the terms of service in the form of a "click-wrap" or similar agreement. The terms of service may include a website usage policy, a website policy, or any other suitable material. In Step (344), if the  
15 contractor (44) does not accept the terms of service, the server (10), in Step (346), displays a help or exit web page, which may log the contractor (44) off the system, provide a frequently ask questions (FAQs) resource, or provide the contractor (44) with a telephone number to contact a help desk for assistance. If the contractor (44) accepts the terms of service, in Step (344), the server (10),  
20 in Step (348), requests background and other data from the contractor (44). The contractor (44) provides the data in Step (350), and, in Step (352), the server (10) stores the data on the contractor database (60).

Once the server (10) has received the data, the server (10), in Step (354), provides the contractor (44) with the password (84), and forwards to the  
25 contractor (44) the log-in web page (80), shown in Fig. 3, to allow the contractor (44), in Step (356), to input the password (84) into the input field (82). Once the contractor (44) has inputted the password (84), the server (10), in Step (358) forwards to the contractor (44) the home page web page (64) shown in Fig. 2. In Step (360), the contractor (44) selects the hyperlink (66)  
30 associated with the contractor's desired action. As described above, and shown in Fig. 2, the contractor (44) may request information relating to

to the supplier (16) the log-in web page (80), such as that shown in Fig. 3. The supplier (16), in Step (370), inputs the password (84) in the input field (82).

Once the supplier (16) has input the password (84) in the input field (82), the server (10), in Step (372) displays the options menu associated with the home page web page (64). In Step (374), if the supplier (16) desires to enter into a new contract, the server (10), in Step (376), requests contract information from the supplier (16) in a manner such as that identified in the new contract creation web page (168), shown in Fig. 8. In Step (378) the supplier (16) inputs the contract information (190). In Step (380), the server (10) displays the contract information (190) in a format similar to that shown in the contract detail web page (194), shown in Fig. 9. In Step (382), the contract detail web page (194) provides the supplier (16) with the option of executing the contract (206). (Figs. 1, 10 and 19A). If the supplier (16) does not choose to execute the contract (206), the server (10) forwards to the supplier (16) the help/exit web page, as described in Step (360).

As shown in Step (382), if the supplier (16) instead executes the contract (206) by clicking on the "execute contract" hypertext mark-up language (202), the server (10), in Step (384), inputs the information (190) into the supplier database (56), contractor database (58), and contract database (60, and forwards an executed copy of the contract to the supplier (16) and to the contractor (44). In Step (386), the server (10) requests information from the supplier (16) as to whether the supplier desires to enter into another contract. If the supplier (16) does not wish to enter into another contract, the server (10), in Step (388), inquires whether the supplier (16) desires another display option. If the supplier (16) does desire another display option, the server (10) returns the supplier (16) to Step (372), displaying the home page web page (64) and associated options menu. (Figs. 2 and 19A). Alternatively, if the supplier (16) does desire to enter into another contract, the server (10) returns to Step (376), wherein the server (10) requests information from the supplier (16) relating to the additional contract.

server (10) displays the list of contracts available for cancellation and the process repeats.

Returning to Step (400), if the supplier (16) does not desire to cancel an existing contract, the server (10), in Step (410), provides the supplier (16) with  
5 a list of options from an options menu, such as that shown in the home page (64). (Figs. 2 and 19B). If the supplier (16) desires an alternative option, the supplier (16) selects the desired option and the server (10), in Step (412), displays the desired option before returning the supplier (16) to Step (388), wherein the server (10) requests whether the supplier (16) desires another  
10 display option. As noted above, if the supplier (16), in Step (388), does desire another display option, the server (10) transfers the supplier (16) back to Step (372), wherein the server (10) displays the home page (64) and associated options menu. (Fig. 2). However, in Step (388), if the supplier (16) does not desire another display option, the server (10) routes the supplier (16) to the  
15 help/exit web page, as shown in Step (360).

Fig. 20 is a flow diagram of the pricing process utilized by the server (10) in accordance with the method of the present invention. As shown in Step (414), the server (10) is provided with a clock (416), such as those well known in the art. The clock (416) is utilized by a software program contained within  
20 the server (10) to calculate a formula at predetermined time intervals. Although the formula is individually tailored to a particular supplier (16), and contractor (44), an example of such a formula would be:

$$(Q)(TQ) = (QP)$$

in which Q represents a time factor reflecting the percentage of the total  
25 quantity (TQ) of commodity to price at each time interval, so that (QP) equals the quantity of commodity priced at each time interval. This formula prices a consistent quantity of a commodity each trading day of the contract as identified by the clock (416). For example, if the contract involved 10,000 bushels of corn to be priced over three months, leaving approximately 66  
30 trading days over which equal quantities (1/66) of the commodity are to be

TP represents the daily market closing price. TFX represents the daily trend factor (moving average).  $TFx = \sum (1 \rightarrow x)(TP)/x$ , where x represents the number of days used to calculate the daily moving average.

$RQ = TQ - PQ$  (remaining quantity = total quantity - priced quantity)

5  $RD = TD - PD$  (remaining days = total days - passed days)

QP equals the quantity of commodity priced each day.

A is a sensitivity factor used to manage the sensitivity of the model to market fluctuations.

B is an integer multiplier of the base daily quantity determined by the model

10 C is a predetermined price floor under which no quantity pricing will occur.

In still another alternative embodiment of the present invention, the formula could be one in which the server (10) monitors market activity to price a predetermined portion of the grain immediately subsequent to a price decline. Such a formula may look like:

15       if  $TP+A \leq TP(D-1)$  and  $TP+A \geq C$ , then  $(B)(RQ)/(RD) = QP$   
           if  $TP+A > TP(D-1)$  or  $TP+A < C$ , then  $QP = 0$

TP represents the daily market closing price.

TP(D-1) represents the previous market closing price.

$RQ = TQ - PQ$  (remaining quantity = total quantity - priced quantity)

20  $RD = TD - PD$  (remaining days = total days - passed days)

QP equals the quantity of commodity priced each day.

A is a sensitivity factor used to manage the sensitivity of the model to market fluctuations.

B is an integer multiplier of the base daily quantity determined by the model

25 C is a predetermined price floor under which no quantity pricing will occur.

Alternatively, the formula could be set to price a commodity the first time a market closes lower after a significant price rally. Such a formula may look like:

30       if  $TFx \geq A$  and  $TP \geq C$ , then  $(B)(RQ)/(RD) = QP$

continue before a market downturn triggers pricing a predetermined quantity of the commodity.

As shown in Step (424), the server (10) examines whether the formula includes a time factor. If so, the server (10), in Step (426), obtains the current  
5 time from the clock (416) and incorporates it into the formula, whereafter the server (10) moves to Step (428). In Step (424), if the server (10) determines the formula does not comprise a time factor, the server (10) also moves to Step (428). In Step (428), the server (10) determines whether the formula comprises a market trend factor. A market trend factor, such as that described above,  
10 would constitute a factor based upon downturns or rallies in a particular market. The factor may either relate to the size of the downturn or rally, or the number of days a rally or downturn has continued. If the formula comprises a market trend factor, the server (10) in Step (430) obtains the current market trend information and incorporates it into the formula, and  
15 moves to Step (432). Similarly, if in Step (428) the server (10) determines the formula does not comprise a market trend factor, the server (10) moves to Step (432), wherein the server (10) determines whether the formula comprises a price factor.

If the formula does comprise a price factor, then, in Step (434), the  
20 server (10) obtains the current market price information and incorporates it into the formula. Such market price information could constitute a set price point, or a price point related to a particular time period. After the server (10) has obtained the current market price information and incorporated it into the formula, the server (10) moves to Step (436). Similarly, if, in Step (432), the  
25 server (10) determines the formula does not comprise a price factor, the server (10) also moves to Step (436), wherein the server (10) determines whether the formula comprises other market control factors.

If the server (10) determines the formula does contain other market control factors, the server (10) moves to Step (438), wherein the server (10)  
30 obtains the other market control factors and incorporates them into the formula. A market control factor may include past, present or future weather

has been priced. (Figs. 1 and 20B). If all of the commodity has been priced, the server (10) in Step (454) closes the contract and updates the databases (56), (58) and (60) to reflect that the contract has indeed been closed.

Alternatively, in Step (452), if the server (10) determines that not all of the  
5 commodity has been priced, then in Step (456), the server (10) examines whether the contract period is over. If the server (10) determines that the contract period is over, then the server (10) moves to Step (454) in which the server (10) closes the contract and updates the databases (56), (58) and (60). If, however, in Step (456) the server (10) determines the contract period is not  
10 over, the server (10) returns to Step (418), wherein the server (10) waits for the clock to signal the server (10) to recalculate the formula at the next predetermined time interval. (Figs. 1, 20A and 20B).

The foregoing description and drawings merely explain and illustrate the invention, and the invention is not limited thereto, except insofar as the  
15 claims are so limited, as those skilled in the art who have the disclosure before them will be able to make modifications and variations therein without departing from the scope of the invention. For example, it is anticipated that any desired means of communication may be utilized between the server (10), supplier (16) and the contractor (44). It is further anticipated that the options  
20 menu (68) may be displayed on each web page to facilitate its utilization. It is also anticipated that the server (10) may be operated and maintained by either the supplier (16) or the contractor (44), and that the invention may be utilized in association with an intranet, extranet or stand alone personal computer fed information through a diskette or similar information transfer means known  
25 in the art. Additionally, it is anticipated that any suitable formula may be utilized in accordance with the method and apparatus of the present invention, and that any suitable security measures known in the art may be utilized to limit or restrict access to the server (10) by the supplier (16), contractor (44), or any other entity. Furthermore, it is anticipated that the present invention may be  
30 utilized by a buyer of a commodity, in which case the buyer may wish to price a commodity after significant drops in price, rather than after significant increases

What is claimed is:

1. A method of pricing a commodity comprising:
  - (a) selecting a predetermined market factor selected from the group consisting of a predetermined time factor, a predetermined price factor, a predetermined trend factor, a predetermined market status factor, and a predetermined market control factor;
  - (b) determining at a first time period a first market condition selected from the group consisting of a first time condition, a first price condition, a first trend condition, a first market status condition, and a first market control condition;
  - (c) providing a formula capable of comparing said predetermined market factor to said first market condition to determine the existence of a favorable pricing condition for a first portion of the commodity;
  - (d) applying said formula to said predetermined market factor and said first market condition to determine the existence of a first favorable pricing condition;
  - (e) pricing a first portion of the commodity when said application of said formula to said predetermined market factor and said first market condition indicates the existence of said first favorable pricing condition;
  - (f) determining at a second time period a second market condition selected from the group consisting of a second time condition, a second price condition, a second trend condition, a second market status condition and a second market control condition;
  - (g) applying said formula to said predetermined market factor and said second market condition to determine the existence of a second favorable pricing condition; and
  - (h) pricing a second portion of the commodity when said application of said formula to said predetermined market factor and said



- 5 (b) storing said predetermined market factor and said formula on said database;
- (c) determining at least ten time periods and related market conditions selected from the group consisting of a related time condition, a related price condition, a related trend condition, a related market status condition and a related market control condition;
- 10 (d) applying said computer to said predetermined market factor and said related market conditions to determine the existence of favorable pricing conditions; and
- (e) pricing quantities of the commodity when said computer indicates the existence of said favorable pricing conditions.

15 9. The method of pricing a commodity of Claim 1, wherein said predetermined market factor is a predetermined time factor, wherein said first market condition is a first time condition, wherein said second market condition is a second time condition, further comprising pricing a first quantity of the commodity when said first market condition is met, and pricing a second quantity of the commodity when said second market condition is met.

20

10. The method of pricing a commodity of Claim 9, wherein said first time condition is a trading day, and wherein said second time condition is the next consecutive trading day, and wherein said first quantity of the commodity is equal to said second quantity of the commodity.

25

11. The method of pricing a commodity of Claim 9, wherein said first time condition is a trading day, and wherein said second time condition is the next consecutive trading day, and wherein said first quantity of the commodity is different than said second quantity of the commodity.

20. The method or pricing a commodity of Claim 1, wherein said predetermined market factor is a predetermined market control factor related to a global climate in a predetermined geographic region at a predetermined time.

21. A method pricing a commodity comprising:

- (a) providing a computer having a database;
- (b) receiving from a supplier of the commodity information relating to a specific type and quantity of the commodity which said supplier is willing to supply;
- (c) receiving from said supplier a selection of a predetermined market factor selected from the group consisting of a predetermined time factor, a predetermined price factor, a predetermined trend factor, a predetermined market status factor and a predetermined market control factor;
- (d) determining at a plurality of time periods, related market conditions selected from the group consisting of a related time condition, a related price condition, a related market status condition and a related market control condition;
- (e) providing a formula capable of comparing said predetermined market factor to said related market conditions to determine the existence of favorable pricing conditions for portions of the commodity;
- (f) applying said formula to said predetermined market factor and said related market conditions to determine the existence of said favorable pricing conditions;
- (g) automatically pricing said portions of the commodity when said application of said formula to said predetermined market factor and said related market conditions indicates the existence of said favorable pricing conditions.

predetermined trend factor, a predetermined market status factor and a predetermined market control factor;

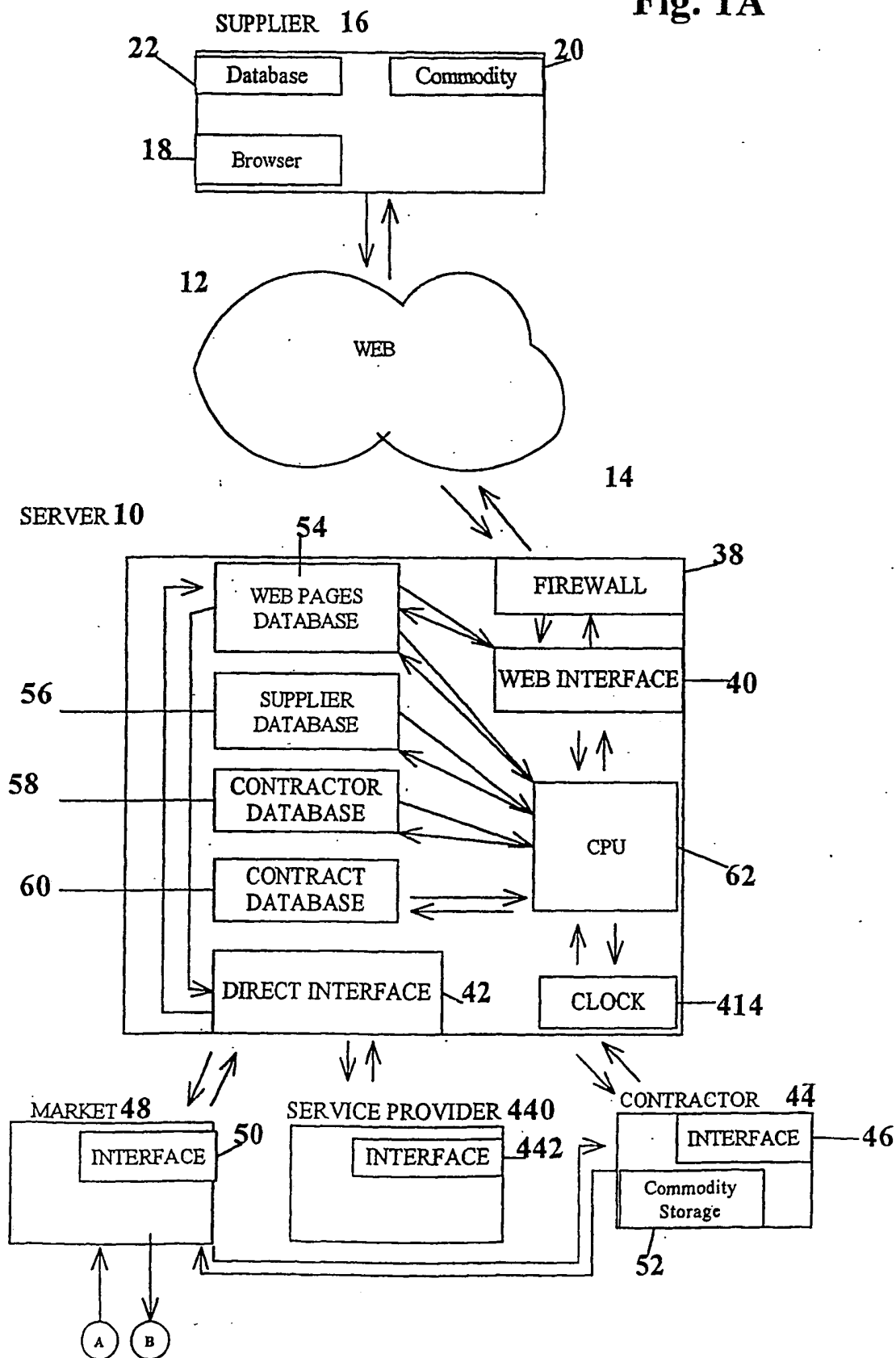
(f) means for determining at a plurality of time related market conditions selected from the group consisting of a related time condition, a related price condition, a related market status condition and a predetermined market control condition;

(g) a formula capable of comparing said predetermined market factor to said related market conditions to determine the existence of favorable pricing conditions for portions of the commodity;

(h) means for applying said formula to said predetermined market factor and said related market conditions to determine the existence of said favorable pricing conditions; and

(i) means for pricing said portions of the commodity when said application of said formula to said predetermined market factor and said related market conditions indicates the existence of said favorable pricing conditions.

Fig. 1A



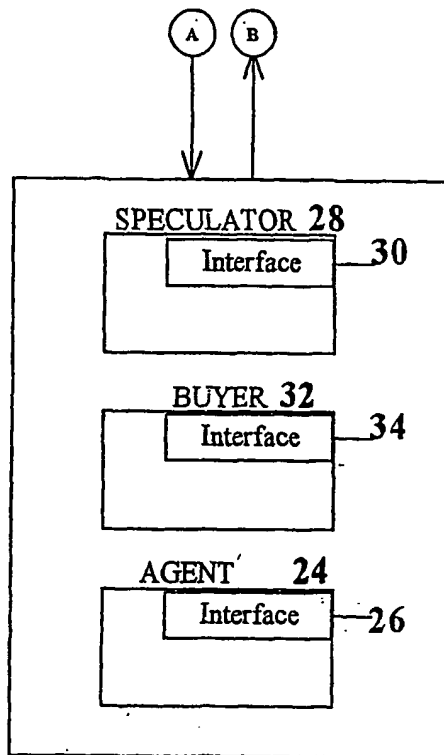
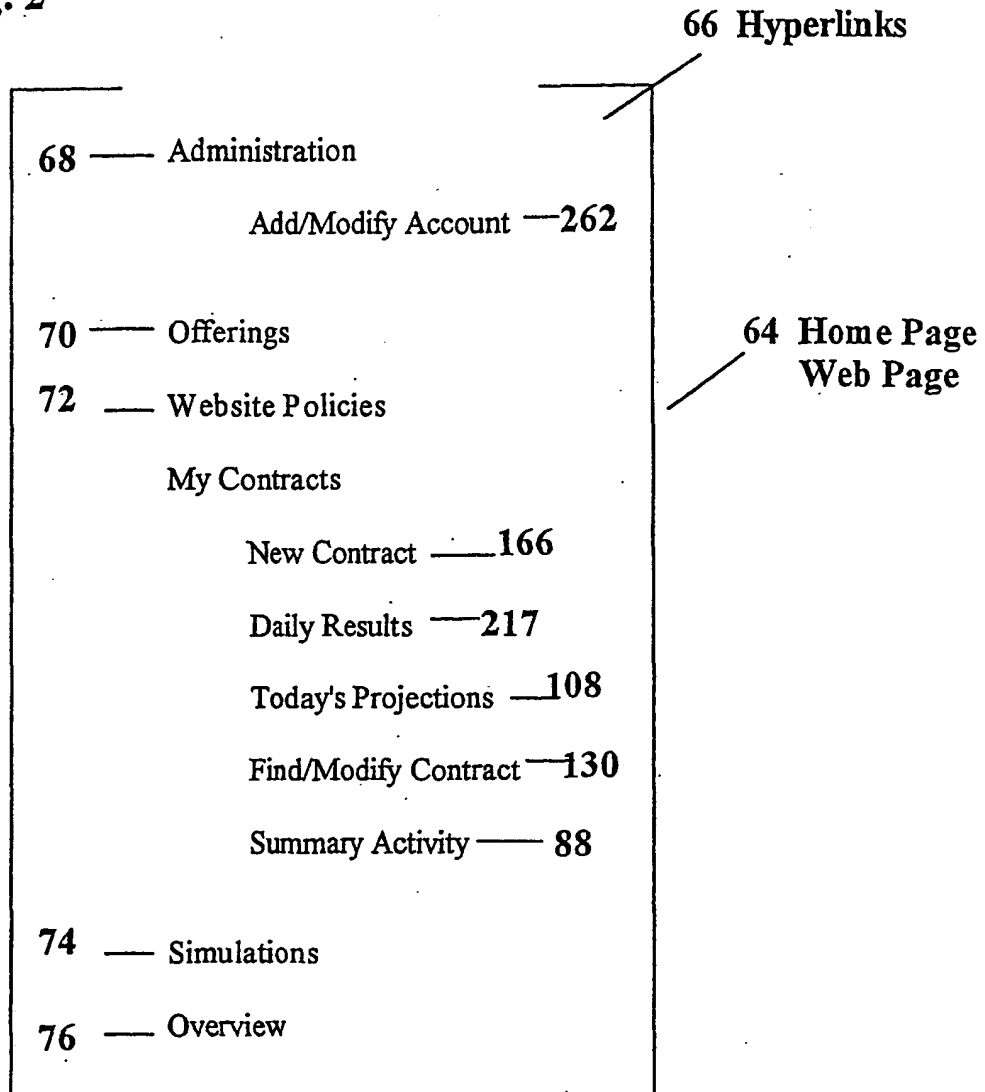


Fig. 1B

**Fig. 2**

**Fig. 3**

Login Web Page

**Account Management**

Enter Producer's E-Markets Login Name:

x x x x x

82 Field

84 Login name

Submit

86

Fig. 4

# Summary Pricing Activity on Open Contracts

(Select appropriate search criteria, then Click "View Summary" link to see results.)

Home

Contractor:

ALL  
E-Markets Inc.

94

Account:

ALL  
Demo.

96

Commodity/Reference Contract Month:

ALL  
CZD  
KWH1  
KWZD

98

View Summary

102

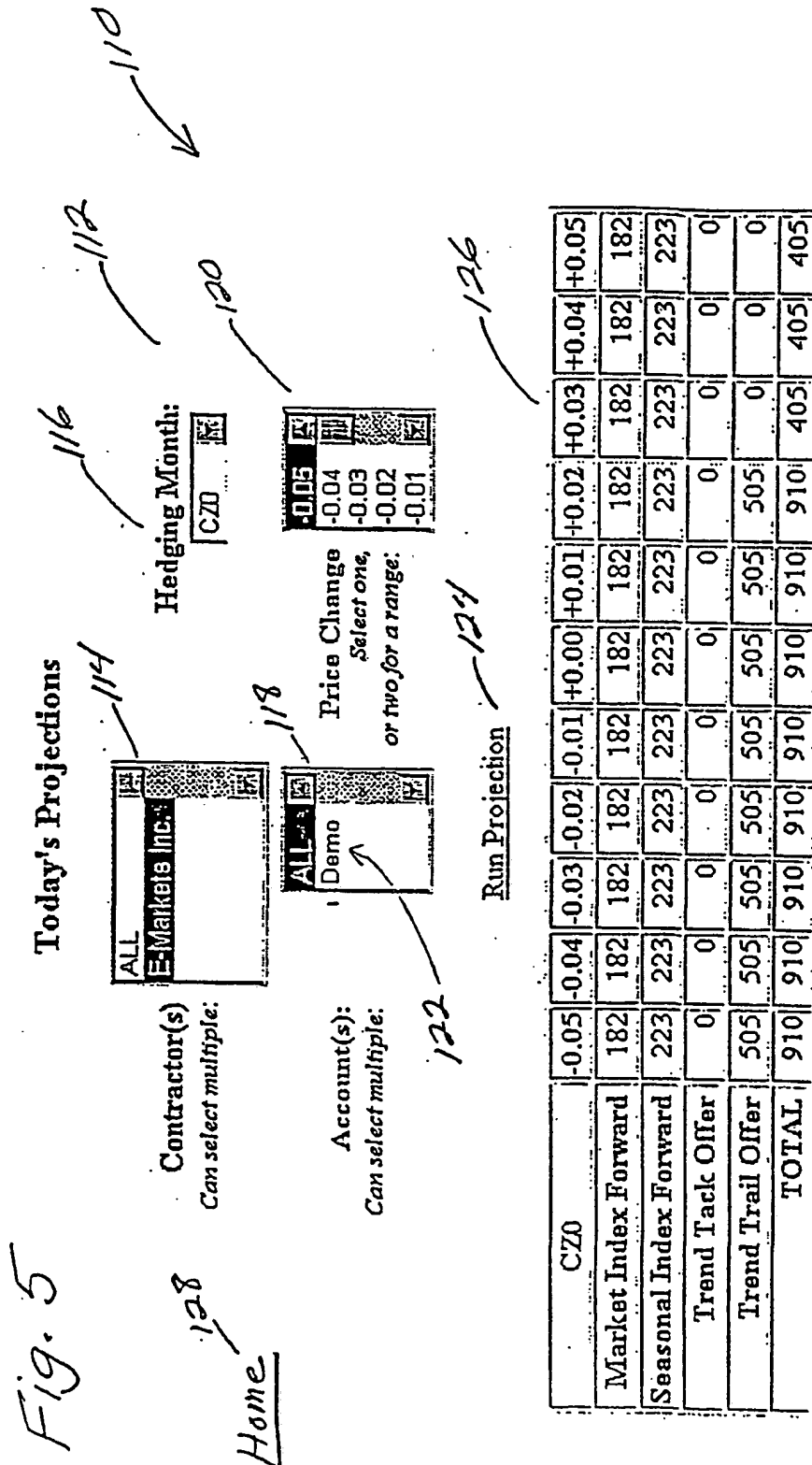
Contract Type	Bushels Priced	Total Avg \$/Bu	% Sold to Date	Unsold Bushels	# of Contracts
Market Index Forward	3454	2.52	35	6546	
Seasonal Index Forward	1818	2.52	18	8182	
Trend Tack Offer	14629	2.63	21	55371	
<b>Total</b>					

104

100

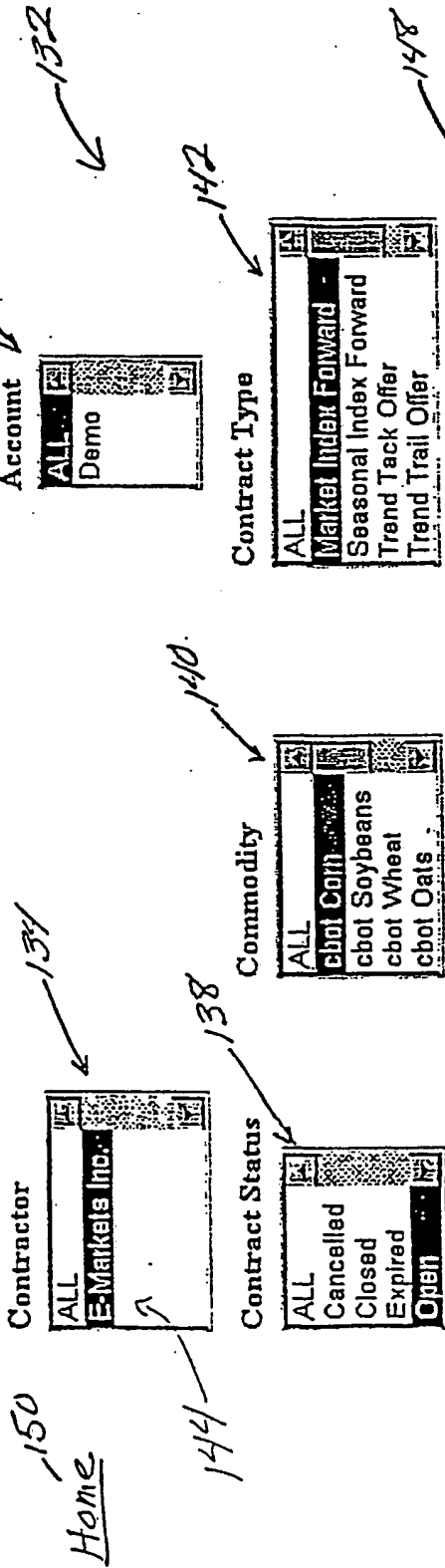
90





# Find Contracts

Fig. 6

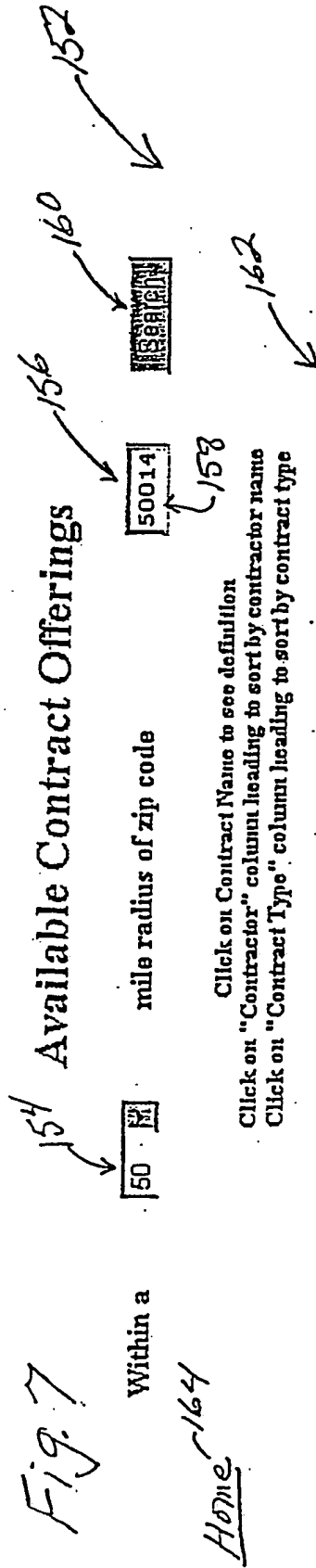


Search 146

Contract #	Account	Create Date	Commodity	Contract Type	End Date	Bushels	Price	Avg Price
321	Demo	2000-05-10	cbot Corn	Market Index Forward	2000-07-30	10000	3454	2.52

[Print Results](#)

[Details](#)



Sort By Contractor Name	Contract Name	Sort By Contract Type
E-Markets Inc.	Bobby	Market Index Forward
E-Markets Inc.	cc	Market Index Forward
E-Markets Inc.	fnscfh	Market Index Forward
E-Markets Inc.	Seasonal Index Forward	Seasonal Index Forward
E-Markets Inc.	fdhssh	Trend Trail Offer

Fig. 8

# Create New Contract

Contractor:  170

Delivery Location:  172

Contract Name:  174

Contract Type:  176

Account:  178

Commodity:  180

Quantity:  182

Start Date:  184

End Date:  186

Choices for Reference Contract Months will be determined by the End Date

188

(Click the "Next" button for the next step):

192

Fig. 9

## Contract Detail

Contract #: 324      Creation Date: 2000-05-10      194  
 Contractor: E-Markets Inc.      Delivery Location: E-Markets Inc.  
 Account: Demo  
 Contract Type: Trend Tack Offer      Contract Name: Trend Tack  
 Commodity: Com      Reference Contract Month: CZ0  
 Start Date: 2000-05-11      End Date: 2000-07-30  
 Trading Days: 55      Bushels: 10000  
 Price at End Option: no      Stop Limit: 0      190  
 Time Span: 60      Sensitivity: .03  
 Status: open

(Click on a blue variable to change its value)

Return to Search — 196Cancel This Contract — 198Download Contract — 200Execute Contract — 202

**Fig. 10**

You have chosen to execute your contract. Please  
review the contract carefully and insert your user I.D. — 208  
or digital signature below.

This Service Agreement is between ABC Contractor  
and XYZ Supplier .....

204  
Contract Web Page

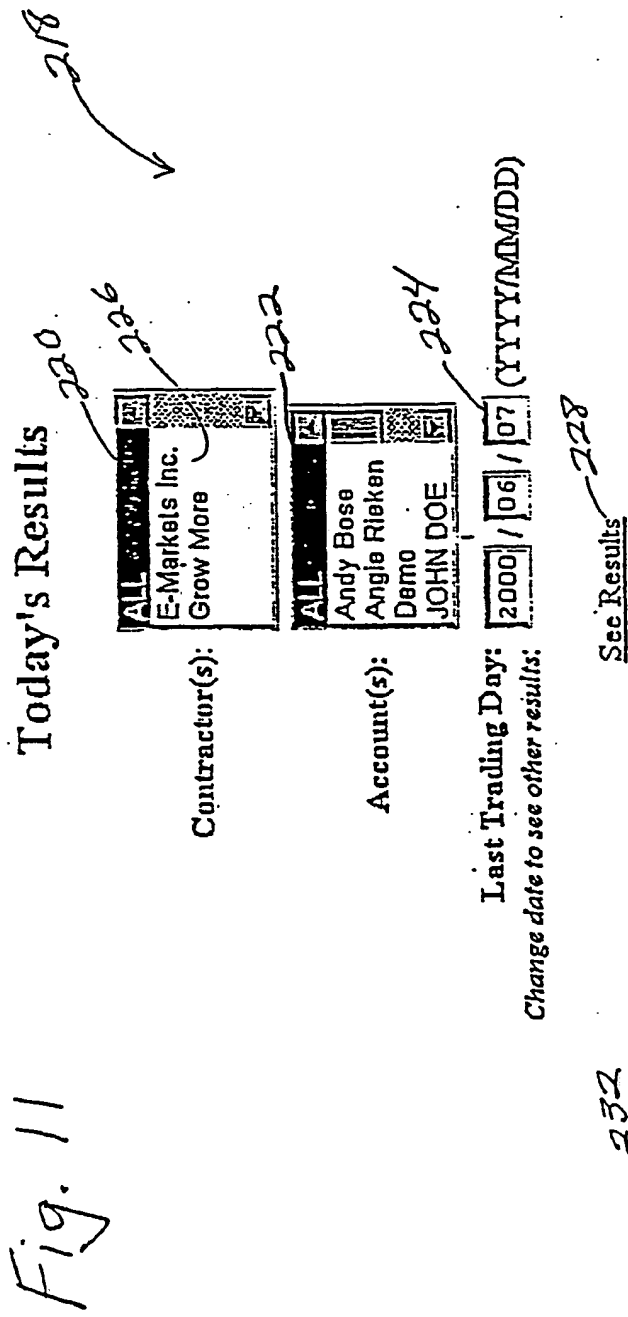
To execute this contract, enter the requested information  
and click the "SUBMIT" BUTTON.

User ID  210

or

Digital Signature  214

216



Itemized By Contract Type 230

Contract Type	Market	Index	Forward	Swap	Option	Other	Total
CFZ0	182	222	0	0	534	0	938
KWYH	0	36	0	0	0	0	36
KWYZ	0	37	0	0	0	0	37

Fig. 12

Today's Projections

Contractor(s)  
Can select multiple:

234

ALL	Log	PF
E-Markets Inc.		
Grow More		

Hedging Month:

236

CZD	PF
-----	----

Account(s):  
Can select multiple:

238

ALL	Log	PF
Andy Bose		
Angie Riiken		
Demo		
JOHN DOE		

Price Change  
Select one,  
or two for a range:

240

0.05	PF
-0.04	PF
-0.03	PF
-0.02	PF
-0.01	PF

Run Projection

Home - 248

242

CZD	-0.05	-0.04	-0.03	-0.02	-0.01	+0.00	+0.01	+0.02	+0.03	+0.04	+0.05
Market Index Forward	182	182	182	182	182	182	182	182	182	182	182
Seasonal Index Forward	223	223	223	223	223	223	223	223	223	223	223
Trend Tack Offer	0	0	0	0	0	0	0	0	0	0	0
Trend Trail Offer	505	505	505	505	505	505	505	505	505	505	505
TOTAL	910	910	910	910	910	910	910	910	405	405	405

246



Fig. 13

# Current Offerings to Producers

Select Contractors:

(Click on name(s) to highlight and then click on "Select" link)

ALL  
E-Markets Inc.  
Grow More

Select

(Click on Contract Name to see definition)

Contractor	Contract Name	Type
E-Markets Inc.	fnstdh	Market Index Forward
E-Markets Inc.	Ednsch	Trend Index Forward
E-Markets Inc.	cc	Market Index Forward
E-Markets Inc.	Bobby	Market Index Forward
E-Markets Inc.	Seasonal index forward	Seasonal Index Forward

Create Offering

Home-260

250

252

254

256

258

Fig. 14

## Account Management

Select Account:

(Click on the account name to highlight and then click on the "Modify Selected Account" link.  
Click the "Create New Account" link to create a new account.)

Andy Bose	<input type="checkbox"/>
Angie Riaken	<input type="checkbox"/>
Demo	<input type="checkbox"/>
JOHN DOE	<input type="checkbox"/>

Modify Selected AccountCreate New Account

264

266

268

270

272

Home 274

## SUPPLIER DATABASE

Fig. 15

278	280	282	284	286	288	290
Supplier No.	Supplier	e-mail Address	Address	Other	Zip Code	Supplier Password
S182	Randy Boals	rboals@...	RR 7 ...	xxxxxx	xxxxxx	137XA
S183	Mike Iker	mike@...	132 Hwy 17 ...	xxxxxx	xxxxxx	GLM4
S184	Bill Watson	wwats@...	217 143rd Ave...	xxxxxx	xxxxxx	JPJ143
S185	Mark Campbell	mcampbell@...	RR 4	xxxxxx	xxxxxx	621JJA
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.

Fig. 16

## CONTRACTOR DATABASE 292

294 <u>Contractor No.</u>	296 <u>Contractor Name</u>	298 <u>e-mail Address</u>	300 <u>Address</u>	302 <u>Other</u>	304 <u>Zip Code</u>	306 <u>Contractor Password</u>
.	.	.	.	.	.	.
.	.	.	.	.	.	.
C53	Cold Mills	cms@...	RR4 ...	xxxxx	xxxxx	CWT61B
C54	Springfield 4	SF4@...	1708 Hwy 72 ...	xxxxx	xxxxx	VR2751
C55	Fairview	FVE@...	18 N. Union ...	xxxxx	xxxxx	LET231
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.



Fig. 18

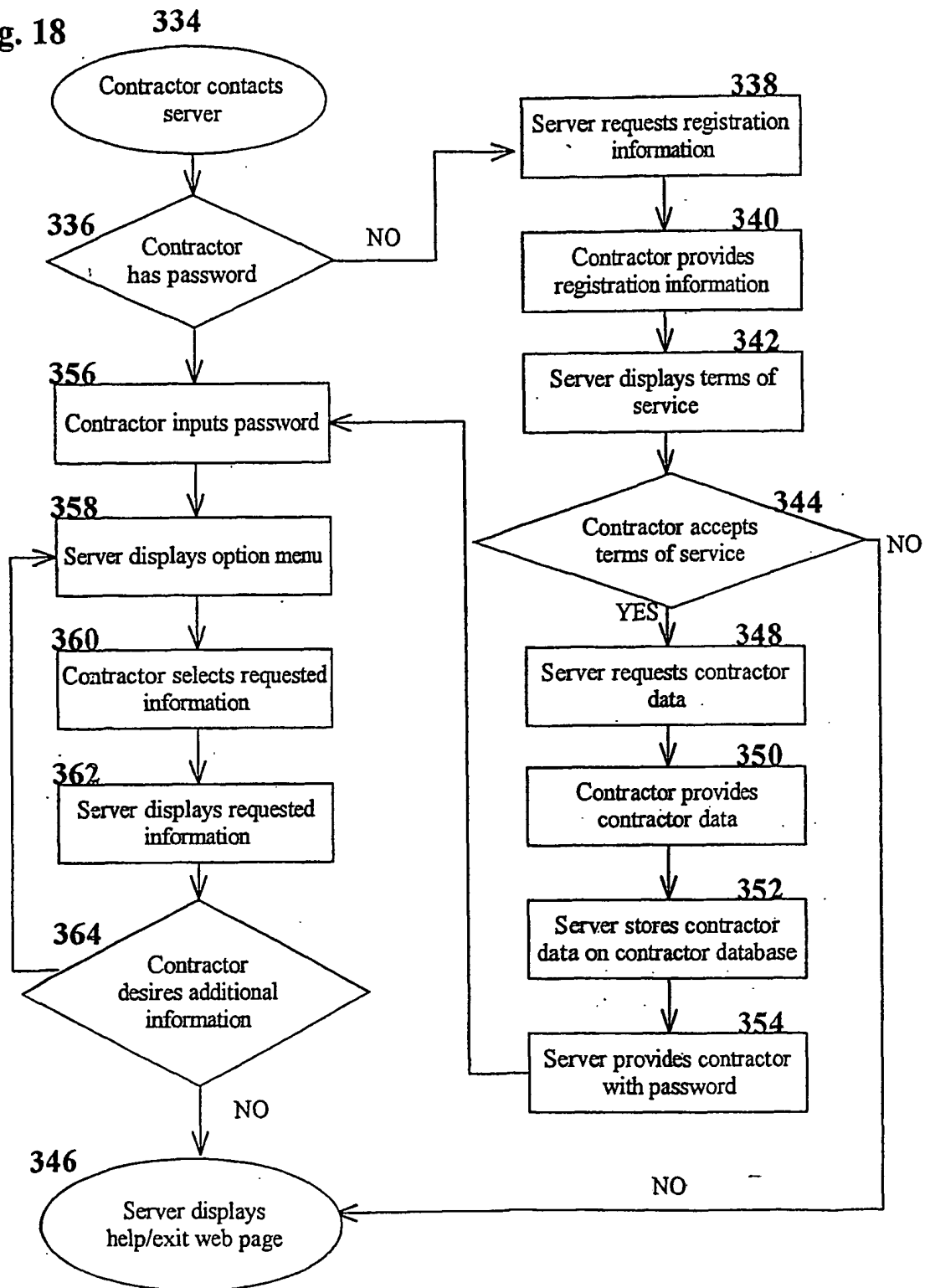
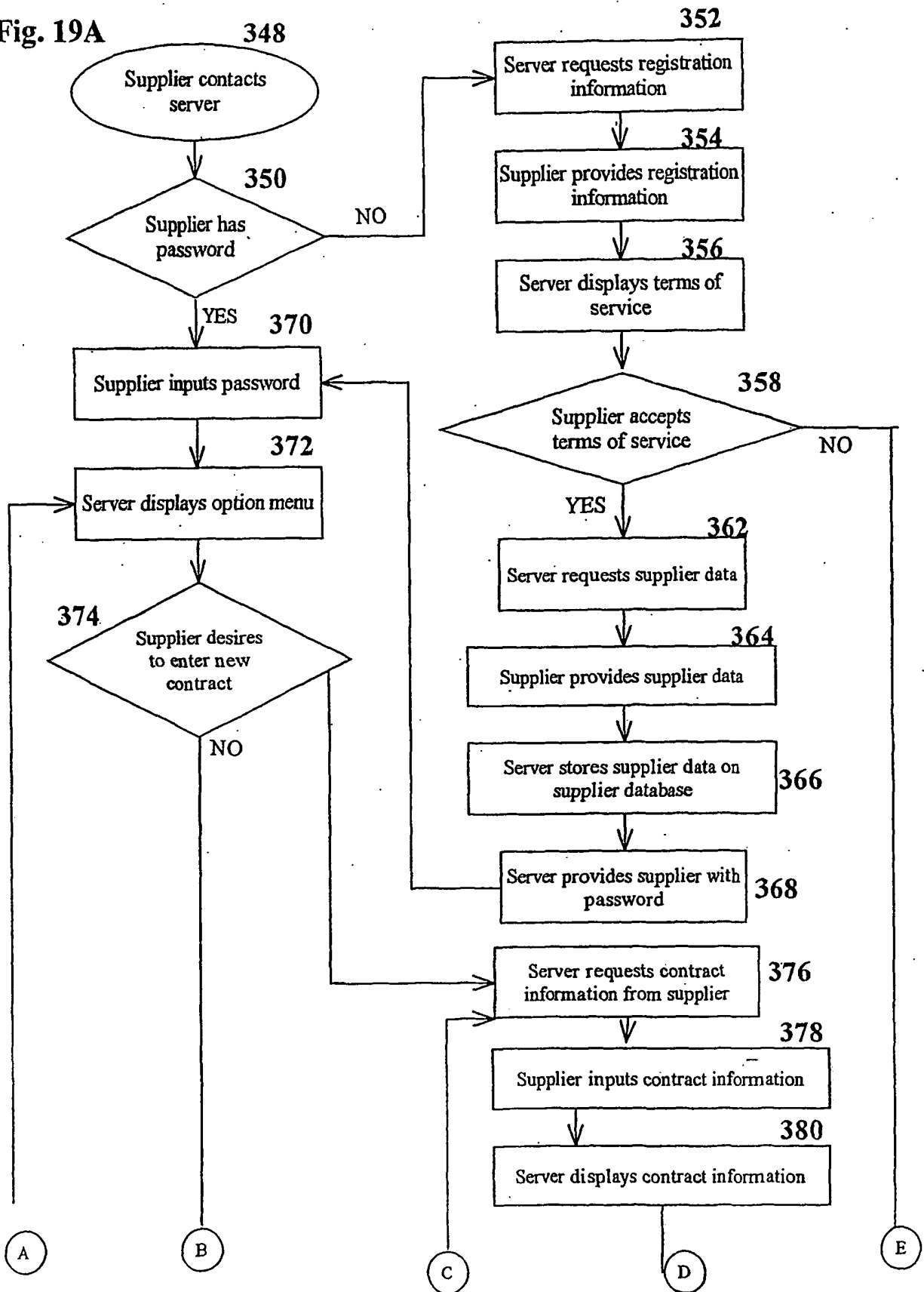


Fig. 19A



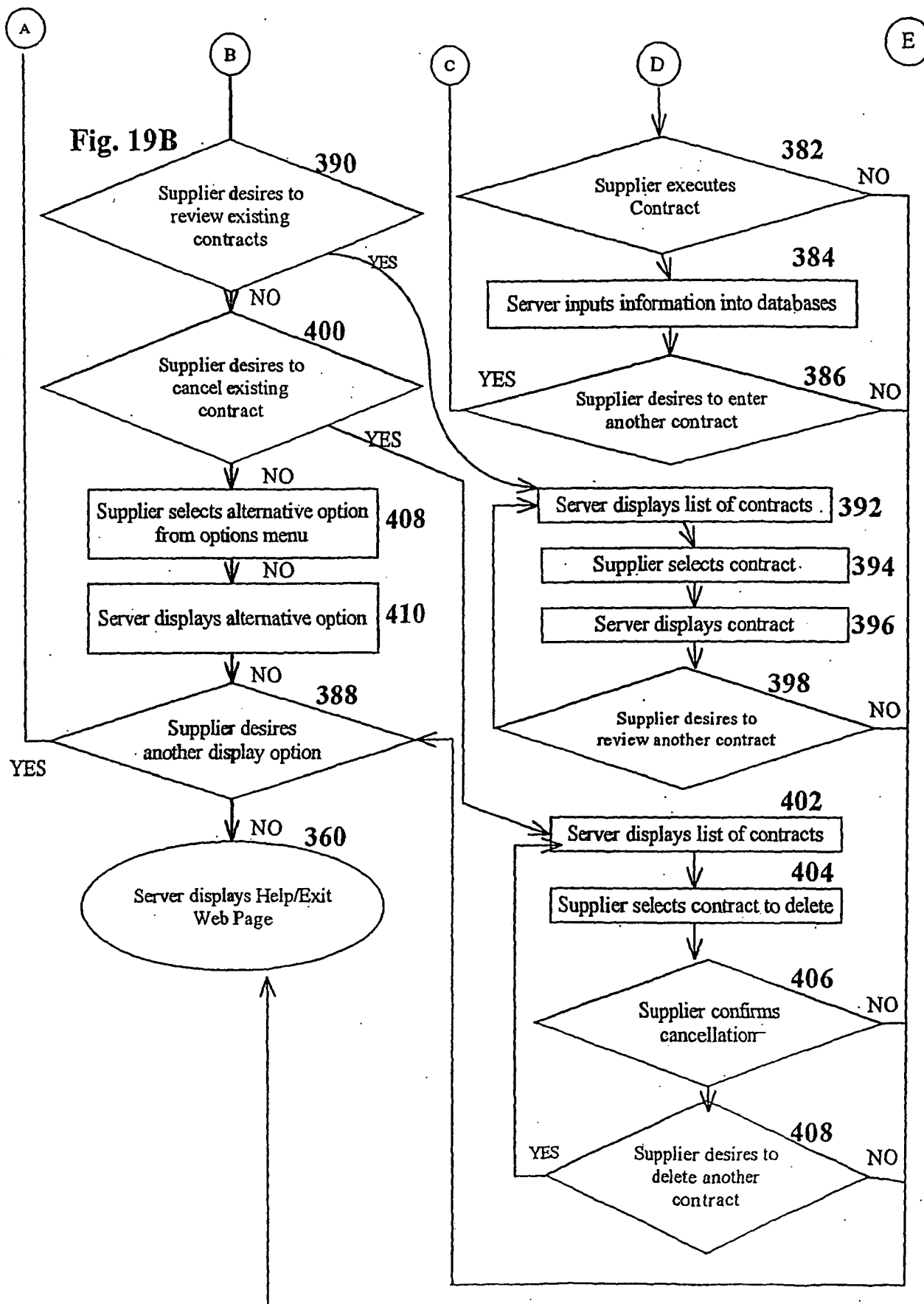




Fig. 20A

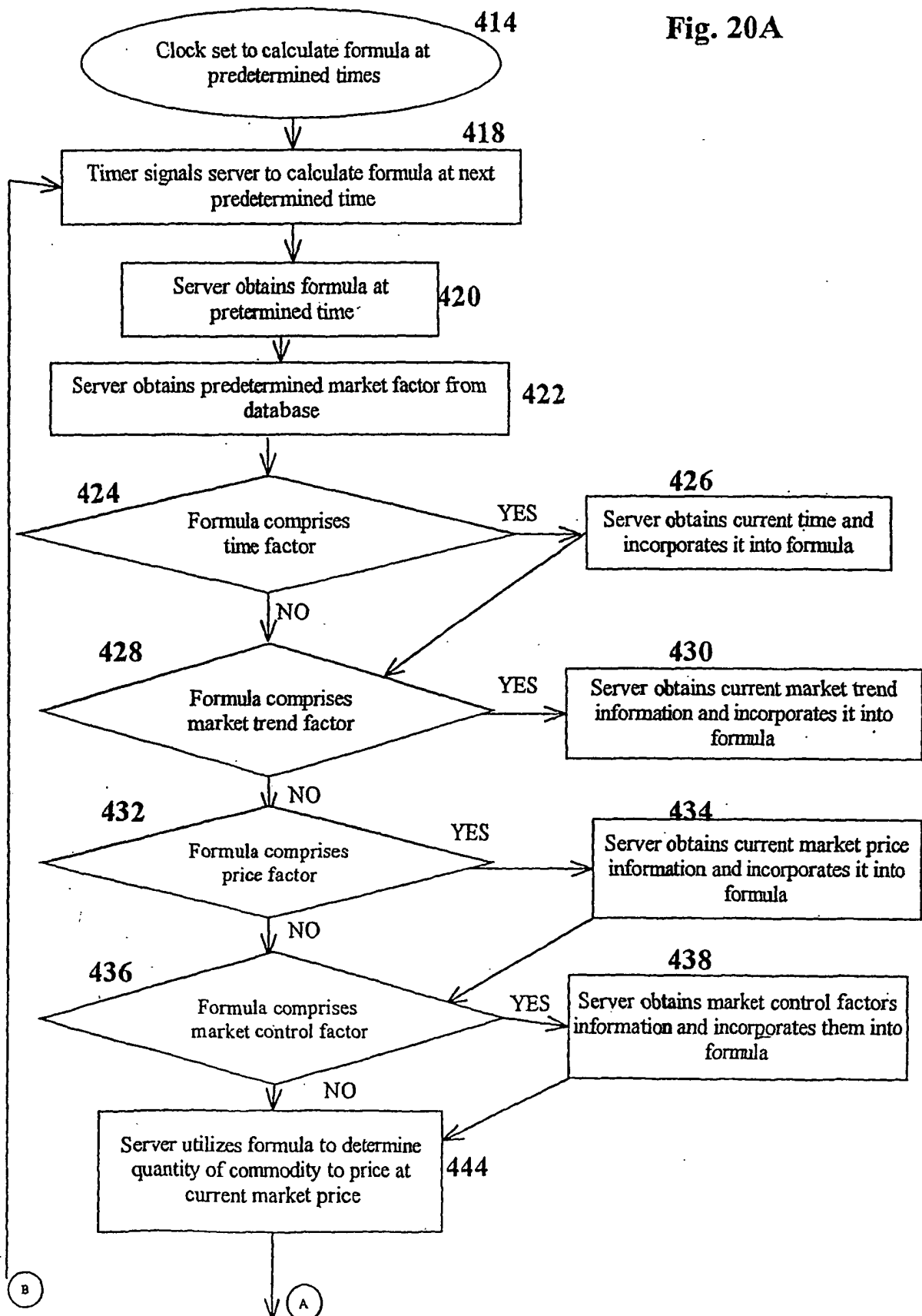


Fig. 20B

